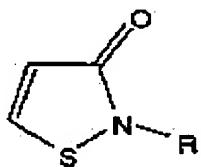


AMENDMENT TO THE CLAIMS:

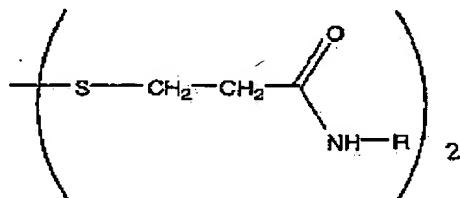
Please amend the claims as follows.

1.- 27. (Canceled)

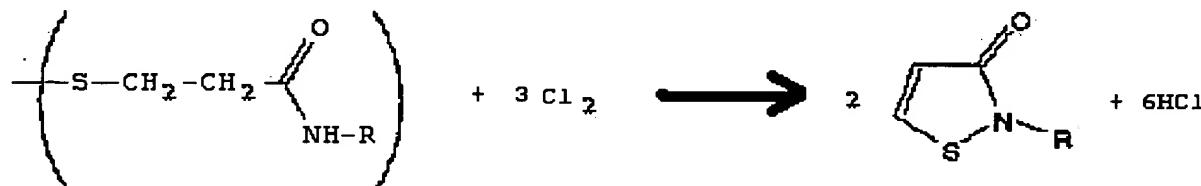
28. (New) A method of producing 2-alkyl-4-isothiazoline-3-one represented by the general formula (III),



wherein the compound represented by formula (II),



is reacted with chlorine as a chlorinating agent in dichloromethane as a solvent, in which hydrogen chloride is insoluble or exhibits low solubility, at a temperature of 39-41°C, according the reaction formula represented by:



wherein R in the compounds of formulae (II) and (III) represents an alkyl group or aralkyl group of C1 to C8, and

wherein the amount of a 5-chloro-2-alkyl-4-isothiazoline-3-one contained in the 2-alkyl-4-isothiazoline-3-one produced is less than 0.1%.

29. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 28, wherein the R represents a methyl group.

30. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 28, wherein the R represents a normal octyl group.

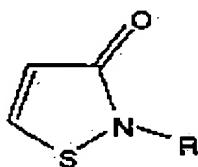
31. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 28, further comprising the steps of filtrating a hydrochloride salt of the compound of formula (III) obtained from the reaction of the compound of formula II with chlorine, and washing the hydrochloride salt with a solvent which is inert to the hydrochloride salt and in which the hydrochloride salt exhibits low solubility.

32. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 29, further comprising the steps of filtrating a hydrochloride salt of the compound of formula (III) obtained from the reaction of the compound of formula II with chlorine, and washing the hydrochloride salt with a solvent which is inert to the hydrochloride salt and in which the hydrochloride salt exhibits low solubility.

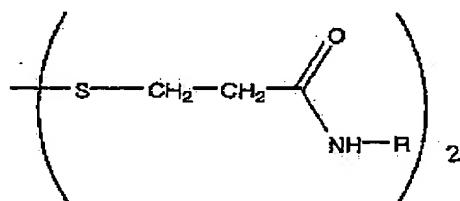
33. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 30, further comprising the steps of filtrating a hydrochloride salt of the compound of formula (III) obtained from the reaction of the compound of formula II

with chlorine, and washing the hydrochloride salt with a solvent which is inert to the hydrochloride salt and in which the hydrochloride salt exhibits low solubility.

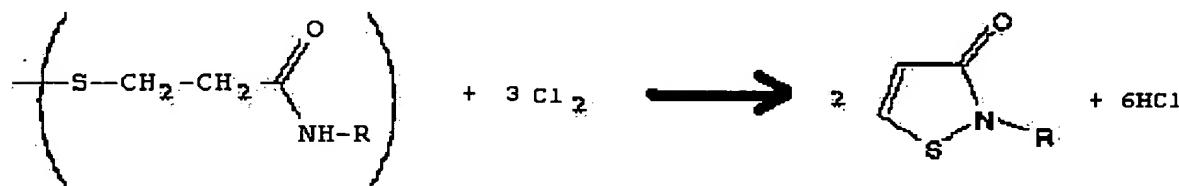
34. (New) An industrial disinfectant composition comprising, as an effective component, a 2-alkyl-4-isothiazoline-3-one represented by the formula (III),



which is obtained by reacting the compound represented by formula (II),



with chlorine as a chlorinating agent in dichloromethane as a solvent, in which hydrogen chloride is insoluble or exhibits low solubility, at a temperature of 39-41°C, according the reaction formula represented by:



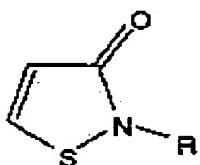
wherein R in the compounds of formulae (II) and (III) represents an alkyl group or aralkyl group of C1 to C8, and

wherein the amount of a 5-chloro-2-alkyl-4-isothiazoline-3-one contained in the 2-alkyl-4-isothiazoline-3-one produced is less than 0.1%.

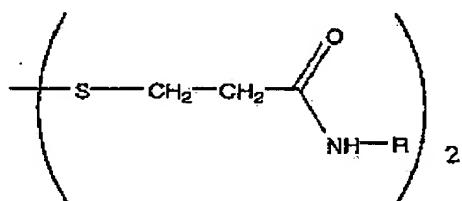
35. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 34, wherein the R represents a methyl group.

36. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 34, wherein the R represents a normal octyl group.

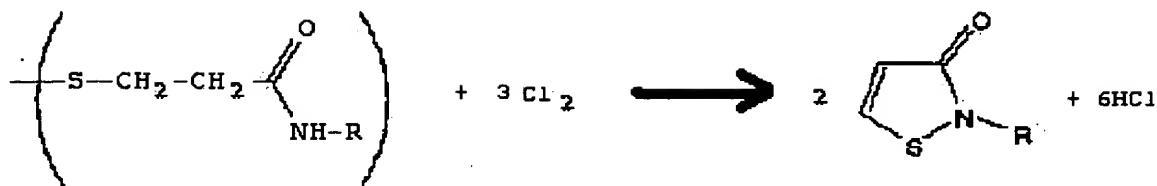
37. (New) An industrial disinfectant composition comprising, as an effective component, a 2-alkyl-4-isothiazoline-3-one represented by the formula (III),



which is obtained by reacting the compound represented by formula (II),



with chlorine as a chlorinating agent in dichloromethane as a solvent, in which hydrogen chloride is insoluble or exhibits low solubility, at a temperature of 39-41°C, according the reaction formula represented by:



filtrating a hydrochloride salt of the compound of formula (III) obtained from the reaction of the compound of formula II with chlorine, and

washing the hydrochloride salt with a solvent which is inert to the hydrochloride salt and in which the hydrochloride salt exhibits low solubility,

wherein R in the compounds of formulae (II) and (III) represents an alkyl group or aralkyl group of C1 to C8, and

wherein the amount of a 5-chloro-2-alkyl-4-isothiazoline-3-one contained in the 2-alkyl-4-isothiazoline-3-one produced is less than 0.1%.

38. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 37, wherein the R represents a methyl group.

39. (New) The method producing a 2-alkyl-4-isothiazoline-3-one as defined in Claim 37, wherein the R represents a normal octyl group.